

Disaster Preparedness

Mrs. Pallavi R. Mangrulkar

Assistant Professor, DVVPFs Institute of Nursing Education, Ahmednagar-414111

Corresponding Author : Mrs. Pallavi R. Mangrulkar

E-mail : pallavi.mangrulkar22@gmail.com

Address : DVVPFs Institute of Nursing Education, Ahmednagar - 414111

Abstract :

India is very prone to a number of natural as well as man-made disasters. 58.6 per cent of the landmass is prone to earthquakes of moderate to high intensity; more than 12 per cent of land is prone to floods; out of 7,516 km long coastline, about 5,700 km is prone to cyclones and tsunamis; 68 % of the cultivable area is vulnerable to drought and hilly areas are at risk from landslides and avalanches. Also the risks of emergencies of Chemical, Biological, Radiological and Nuclear (CBRN) origin are there. Increased risks of can be related to increasing population, terrorism, urbanization and industrialization, development within high-risk zones, environmental degradation and climate change to ensuring clarity about roles and responsibilities of the State, District and local authorities.

Maharashtra has a history of various hazards and it was first in India to start a Disaster Management Unit (DMU) after the Latur earthquake. Since 1993, Disaster Management in Maharashtra is fast evolving from a reactive response oriented to proactive strategy based system. The state has witnessed the devastating disasters like Latur Earthquake in 1993, Mumbai Flood in 2005, Cyclone Phyan in 2007 & recent floods in Kolhapur, Sangli & Pune in 2019.

Keywords: Disaster, Disaster preparedness, Mitigation

Definition of Disaster:

According to WHO, A disaster is an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community.

Types of Disaster:

Water & climate related disasters

1. Floods & drainage management
2. Cyclones
3. Tornados & hurricanes
4. Hailstorms& Cloud burst
5. Heat waves & cold waves
6. Snow avalanches
7. Droughts
8. Thunder & lightening
9. Tsunamis

Biological related disasters

1. Biological disasters & epidemics
2. Pest attacks
3. Cattle epidemics
4. Food poisoning

Geological related disasters

1. Landslides & mudflows
2. Earthquakes
3. Dam failures
4. Minor fires

Chemical, industrial & nuclear related disasters

1. Forest fires & Urban fires
2. Mine flooding
3. Oil spillage
4. Major building collapses
5. Serial bomb blasts
6. Festival related & Electrical disasters & fires
7. Air, roads & rail accidents ⁽¹⁾

There are three main aspects of disaster management:

- 1) Disaster preparedness
- 2) Disaster response
- 3) Disaster mitigation ⁽²⁾

Disaster preparedness means the measures taken to prepare for and to reduce the effects of disasters. It involves to predict, if possible, prevent disasters, mitigate its impact on populations, and respond and effectively cope with its consequences. ⁽³⁾ Disaster preparedness is a continuous process resulting from a wide range of risk reduction activities and resources. It requires the contributions of all areas - ranging from training and logistics, to health care, recovery, livelihood to institutional development. ⁽⁴⁾

Disasters affect millions of people on a personal, local community business, or national level. The important rule for successful disaster management at all levels is to increase awareness, develop action plans and practice them.⁽⁵⁾

Disaster Preparedness

Mrs. Pallavi R. Mangrulkar Levels of disaster preparedness:

- 1) Personal preparedness- personal & family preparations can help solve some of the conflicts that may arise & will allow nurses to attend to client needs as soon as possible. Important documents should always be kept in waterproof containers.
- 2) Professional preparedness- as a nursing personnel, nurses should be aware about the disaster plan, action required during disaster, delivering CPR & emergency management, Triage etc. personal items that are required for nurses preparing to help in a disaster. Include following
 - Copy of professional license
 - Personal equipments such as stethoscope
 - Flashlights & extra batteries
 - Cellular phones
 - Warm clothing
 - Protective shoes
 - Record keeping material
 - Pocket sized reference books
 - Watch
- 3) Community preparedness- it includes people & community volunteers. Nurses need to review the history of community including the past disasters, it helps to plan for the future disasters. There is a need to involve these community volunteers in the regular mock drills conducted.⁽⁶⁾

Benefits of Disaster Preparedness:

- 1) It saves human life.
- 2) Prevents economic loss.
- 3) Less confusion in implementing the plan.
- 4) Limits the magnitude of disaster.

Disaster preparedness team members:

- 1) A committee of central, state & local officials
- 2) Civil defense & armed forces
- 3) Medical, nursing & all paramedical professionals
- 4) Representatives of various NGOs, voluntary agencies & social welfare agencies

- 5) Ambulance service
- 6) Police, fireman, electrician, home guards etc
- 7) Community members & media⁽⁷⁾

Disaster preparedness includes:

- 1) Evaluation from past experiences about risk- we need to learn from our past experiences about the losses & impact of disaster.
- 2) Location of disaster prone areas- there is a need to locate all the disaster prone areas & spread the regular awareness regarding disaster preparedness & life saving measures. There should be a regular watch on the disaster prone areas & an emergency information system should be updated.
- 3) Organization of communication, information & warning system- an updated system should be organized & prepared for emergency situations. Early warnings need to be given at all levels.
- 4) Ensuring co-ordination & response mechanism- a proper coordination & communication system needs to be kept functioning.
- 5) Development of public education programme- Regular public awareness & education programs should be developed & implemented. At times mock drills or simulation activities can be carried out.
- 6) Co-ordination with media-
- 7) National & international relations- it helps to get an early & essential help at the time of disaster.
- 8) Keeping stock of food, drug & other essential commodities- as the disaster is identified early, the adequate stock of all essential commodities including food, drugs & clothes can be kept ready.

Nurses role in disaster preparedness:

1. Initiate disaster plan
2. Develop public education program
3. Facilitate preparedness within the community & place of employment
4. Organize disaster mock drills
5. Maintenance of safe environment
6. Update the records of vulnerable populations
7. Understanding of available sources in the community & hospitals
8. Ensure coordination & response mechanism
9. Organize training program on emergency resuscitation- basic life support measure.⁽⁸⁾

References:

1. Gupta Piyush, Khan Amir Maroof. Textbook of Community Medicine. CBS Publishers; 2016:541-542.
2. Park K. Park's Textbook of Preventive & Social Medicine. Bhanot Publications; 2017: 834-837.
3. Disaster Preparedness [Internet] 2017 [cited 2019 Sep 29]. Available from: <https://www.preparecenter.org/topics/disaster-preparedness>.
4. Disaster Preparedness [Internet] [cited 2019 Sep 28]. Available from: <https://media.ifrc.org/ifrc/what-we-do/disaster-and-crisis-management/disaster-preparedness>.
5. Disaster Preparedness [Internet] 2016 [cited 2019 Sep 28]. Available from: <https://www.cdsmith.com/en/Client-Solutions/Insights/10-Steps-to-Disaster-Preparedness>
6. Stanhope M, Lancaster J. Community & Public Health Nursing. Mosby Publication; 2000: 472-474.
7. Anitha. Disaster Preparedness. TNNMC Journal Of Community Health Nursing. 2019 Jan- June:7(1):23-27.
8. Das Papri. Textbook of Community Health Nursing. Paras Meddical Publishers. 2017: 528-529.